

## REMARKS

Entry of this amendment and reconsideration of this application as so amended are requested. By this amendment Applicants have amended claims 1 and 6 for clarity, have amended claim 2 to conform to the amendments in claim 1 and have amended claim 4 to correct a typographical error. Claims 1-6 remain in the case.

The Examiner maintains the rejection of claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over Etheridge et al ("Etheridge") in view of Sullivan et al ("Sullivan"). Applicants continue to respectfully traverse this combination suggested by the Examiner as not producing the invention claimed by Applicants.

In contradistinction to Applicants' claimed invention Etheridge, as has been pointed out before, increases the percentage of time that a digital oscilloscope actively monitors an input signal by combining multiple acquisitions between display updates. Etheridge also teaches counting "new" pixels for each acquisition relative to a reference waveform, which may be a template waveform or an initial series of combined acquisitions, to determine whether a new acquisition differs significantly from the reference or prior acquisitions. At best Etheridge teaches acquiring waveform data, combining a series of such acquisitions, displaying the combined acquisitions, and for each acquisition determining whether the acquisition represents a significantly different or out of the ordinary waveform. Actions taken based upon the new pixel count include storing the associated composite waveform for later analysis, displaying the image in a different color or other indication to alert an operator, or stopping further acquisitions. Applicants agree with the Examiner that Etheridge teaches acquiring waveform data using a first set of acquisition parameters (trigger criteria) and generating a display based on the acquired waveform data. However, whereas Etheridge identifies an acquisition as an out of ordinary waveform, Applicants submit that Etheridge does not teach selecting a feature (as opposed to a threshold number of "new" pixels) that distinguishes the visually distinct waveform from other displayed waveforms, i.e., the feature that makes the new acquisition out of the ordinary. One of ordinary skill in the art who has read the specification readily realizes that "selecting a

feature” is more than just identifying that an acquisition is an out of the ordinary waveform, but requires identifying the feature of the out of the ordinary waveform that makes it different. However Applicants have amended claim 1 for clarity to recite that the selected feature is “within the displayed waveforms.”

Applicants also submit that Etheridge does not teach or suggest “automatically deriving *a second set of* acquisition parameters that discriminate between the selected feature and other features of the displayed waveform.” (Emphasis indicates amendment made to clearly differentiate these acquisition parameters from the first set of acquisition parameters that resulted in the initial acquisitions.) The Examiner fails to point to specific language in Etheridge that supports such an assumption by the Examiner of the teaching of Etheridge. The Examiner points to the Summary and Abstract as a whole, vaguely to drawing figures, to the background that discusses channel plate technology and the deficiencies of prior art oscilloscopes, and to the section that discusses determining whether the new acquisition is an out of the ordinary waveform. Nowhere in the cited portions of Etheridge, or anywhere else, do Applicants find any reference to automatically deriving a second set of acquisition parameters from a selected feature of a displayed waveform. Certainly, as admitted by the Examiner, Etheridge does not disclose acquiring waveform data using the second set of acquisition parameters and displaying the resulting new set of acquisitions.

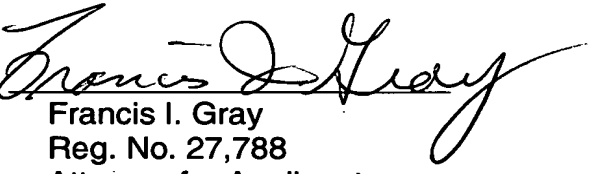
Sullivan discloses the detection of unusual waveforms by determining how many new pixels are affected in the rasterization process. Once the unusual waveforms are detected, they are re-rasterized, not re-acquired, with extra intensity or into a different color in order to make them readily apparent on the display. Applicants recite automatically deriving a second set of acquisition parameters, which neither Etheridge nor Sullivan teach or suggest, and then acquiring waveform data (not re-rasterizing) using the second set of acquisition parameters so only the unusual waveforms are acquired, i.e., the waveforms that have the selected feature from which the second set of acquisition parameters are derived. Therefore neither reference teaches or suggests the feature selection, the automatic derivation of a new or second set of acquisition parameters based on the selected feature, and acquiring of waveform data based on such new acquisition

parameters as is recited by Applicants in claims 1 and 6. Thus independent claims 1 and 6 together with claims 2-5 dependent from claim 1 are deemed to be allowable as being nonobvious to one of ordinary skill in the art over Etheridge in view of Sullivan.

In view of the foregoing remarks entry of this amendment and allowance of claims 1-6 are urged, and such action and the issuance of this case are requested. In the event the Examiner maintains the rejection of these claims, entry of this amendment is requested as clarifying the issues for appeal.

Respectfully submitted,

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